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(54) COSMETIC

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a water-in-oil emulsified type cosmetic containing a silicone-based surfactant, a silicone oil, a polyhydric alcohol and salts in a specific amount.

SOLUTION: This invention relates to a cosmetic extremely improving stability and a use feeling of a water-in-oil emulsion by including a silicone-based surfactant, a silicone oil and a polyhydric alcohol, and combinedly using 5-20 wt.% of salts such as sodium citrate or sodium chloride.

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CLAIMS

[Claim(s)]

[Claim 1] The charge of makeup of the water-in-oil type emulsification type which comes to blend 5 - 20 % of the weight (for it to only consider as % hereafter.) of salts, including a silicone system surfactant, silicon oil, and polyhydric alcohol.

[Claim 2] The charge of makeup according to claim 1 whose loadings of polyhydric alcohol are 10 - 50%.

[Claim 3] The charge of makeup according to claim 1 whose salts are a sodium citrate or a sodium chloride.

[Claim 4] The charge of makeup according to claim 2 or 3 whose polyhydric alcohol is a glycerol, diglycerol or 1, and 3-butylene glycol.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the charge of makeup.

[0002]

[Description of the Prior Art] In the charge of makeup, a water-in-oil type emulsification object has water repellence, a water resisting property, and high perspiration resistance, and rather than the oil-in-water type emulsification object, it excels in protection of the skin, maintenance of flexibility, etc., and is widely used for the hand cream, the charge of makeup, the charge of sun screen makeup, the charge of hair makeup, etc.

[0003] On the other hand, it is common for the organic-functions side of the charge of makeup using water-in-oil type emulsification to be inadequate, and, recently, has been improved by using silicon oil, silicone system surfactants, such as denaturation silicone required for the emulsification, etc.

[0004] However, when silicon oil was blended, it is very difficult to obtain a stable water-in-oil type emulsification object, and the problem was not only in an elevated temperature but in the stability under low temperature. On a feeling of use, although especially the thing of high water content was felt refreshed and could also reduce stickiness, it had a problem further with stability. In spite of having desired these strongly from the consumer, the present condition was that the charge of makeup using the water-in-oil type emulsification object which was excellent in the preservation stability and the feeling of use which can be equal to marketing is not obtained.

[0005]

[Problem(s) to be Solved by the Invention] As a result of this invention persons' repeating research wholeheartedly about water-in-oil type emulsification in view of such the actual condition, by combining silicon oil, the polyhydric alcohol of polyether denaturation silicone and the amount of specification, the salts of the amount of specification, and the oil phase thickener of the amount of specification, it excelled in temperature stability extremely, and the sensuous sufficiently satisfying charge of makeup was found out. this invention persons came to complete this invention based on the above-mentioned knowledge.

[0006]

[Means for Solving the Problem] That is, the charge of makeup of the water-in-oil type emulsification type characterized by this invention coming to blend polyether denaturation silicone, silicon oil, the polyhydric alcohol of the amount of specification, the salts of the amount of specification, and the oil phase thickener of the amount of specification is offered.

[0007] As for the polyether denaturation silicone used by this invention, for example, a polyoxyethylene methyopolysiloxane copolymer, a polyoxypropylene methyopolysiloxane copolymer, the Pori (oxyethylene oxypropylene) methyopolysiloxane copolymer, a methyopolysiloxane cetyl methyopolysiloxane Pori (oxyethylene oxypropylene) methyopolysiloxane copolymer, etc. are raised. These polyether denaturation silicone may be used independently, or two or more sorts may be mixed and used for it.

[0008] As silicon oil used by this invention, although dimethyl silicon oil, methylphenyl silicon oil, methyl hydrogen silicon oil, annular dimethyl silicon oil, etc. are raised, dimethyl silicon oil and annular dimethyl silicon oil are desirable preferably. Annular dimethyl silicon oil is desirable more preferably. As annular dimethyl silicon oil, octamethylcyclotetrasiloxane, decamethyl cyclopentasiloxane, a methyl cyclo polysiloxane, etc. are raised, for example. These silicon oil may be used independently, or two or more sorts may be mixed and used for it.

[0009] as the polyhydric alcohol used by this invention — 1, 3-butylene glycol, propylene glycol, and pentanediol — it passes and there are a xylene glycol, diglycerol, a glycerol, triglycerol, a tetra-glycerol, a PENTA glycerol, a hexa glycerol, an OKUTA glycerol, a nona glycerol, a deca glycerol, trimethylolethane, a pen TAERI slit, sorbitan, a sorbitol, dipropylene glycol, a polyethylene glycol, etc. Preferably, 1, 3-butylene glycol, a glycerol, diglycerol, and dipropylene glycol are desirable. A glycerol and diglycerol are desirable more preferably. These polyhydric alcohol may be used independently, or two or more sorts may be mixed and used for it.

[0010] As salts used by this invention, what is necessary is just the salt which dissolves in water. For example, the salt of organic bases, such as organic-acid salts, such as mineral, such as a sodium chloride, a magnesium chloride, a sodium sulfate, magnesium sulfate, and a potassium nitrate, a sodium citrate, potassium acetate, sodium succinate, and sodium aspartate, hydrochloric-acid ethanolamine, an ammonium nitrate, and arginine hydrochloride, etc. is raised. A sodium chloride, a magnesium chloride, magnesium sulfate, a sodium citrate, potassium acetate, and the sodium succinate are good, and a sodium chloride and a sodium citrate are good more preferably. These salts may be used independently, or two or more sorts may be mixed and used for them.

[0011] As for the oil phase thickener used by this invention, dextrin fatty acid ester, sucrose fatty acid ester, fatty-acid glycerol ester, etc. are raised. especially — carbon numbers 8-24 — the ester compound of the fatty acid of 14-20 is preferably desirable. As these examples, dextrin palmitic-acid ester, dextrin myristic-acid ester, Dextrin stearic acid ester, dextrin palmitic-acid stearic acid ester, Dextrin oleate, dextrin iso palmitic-acid ester, Dextrin isostearic acid ester, dextrin behenic acid ester, Cane-sugar palmitic-acid ester, cane-sugar myristic-acid ester, cane-sugar stearic acid ester, Cane-sugar palmitic-acid stearic acid ester, cane-sugar oleate, Cane-sugar iso palmitic-acid ester, cane-sugar isostearic acid ester, Cane-sugar behenic acid ester, glycerol palmitic-acid ester, glycerol myristic-acid ester, Glycerol stearic acid ester, glycerol palmitic-acid stearic acid ester, glycerol oleate, glycerol iso palmitic-acid ester, glycerol isostearic acid ester, glycerol behenic acid ester, etc. are mentioned. Preferably Dextrin palmitic-acid ester, dextrin myristic-acid ester, Dextrin stearic acid ester, dextrin palmitic-acid stearic acid ester, Dextrin oleate, cane-sugar palmitic-acid ester, cane-sugar myristic-acid ester, cane-sugar stearic acid ester,

cane-sugar palmitic-acid stearic acid ester, Cane-sugar oleate, glycerol palmitic-acid ester, glycerol myristic-acid ester, glycerol stearic acid ester, glycerol palmitic-acid stearic acid ester, and glycerol oleate are mentioned. Dextrin palmitic-acid ester, dextrin myristic-acid ester, cane-sugar stearic acid ester, glycerol stearic acid ester, glycerol oleate, and glycerol behenic acid ester are mentioned more preferably. These oil phase thickeners may be used independently, or two or more sorts may be mixed and used for them.

[0012] Moreover, although especially the loadings of the polyether denaturation silicone in the charge of makeup of this invention are not limited, they are 1 - 10% more preferably 0.1 to 20%.

[0013] Moreover, although especially the loadings of the silicon oil in the charge of makeup of this invention are not limited, they are 15 - 60% more preferably 5 to 90%.

[0014] Moreover, the loadings of the polyhydric alcohol in the charge of makeup of this invention are 20 - 40% preferably 10 to 50%.

[0015] Moreover, the loadings of the salts in the charge of makeup of this invention are 7 - 15% preferably 5 to 20%.

[0016] Moreover, the loadings of the oil phase thickener in the charge of makeup of this invention are 1 - 5% preferably 0.1 to 10%.

[0017] Although not limited especially about the manufacture approach, for example, the heating dissolution of the oil phase thickener is carried out at the oily basis containing silicon oil, the aqueous-phase component is slowly added to the oil phase component, agitating after cooling to 15-35 degrees C, and there is the approach of emulsifying. It is more good to homogenize using a homogenizer etc.

[0018] Moreover, the component generally used for the charge of makeup if needed can be suitably blended with the charge of makeup of this invention in the range which does not spoil the effectiveness of this invention.

[0019] Specifically as a surfactant, the nonionic surfactant usually used for the charge of emulsification mold makeup, an anionic surfactant, a cationic surfactant, an amphoteric surface active agent, amphiphile, etc. are mentioned.

[0020] As oily matter, fats and oils, lows, a hydrocarbon oil, ester, fluoro silicone oil, a perfluoro polyether oil, etc. are mentioned.

[0021] As aqosity matter, lower alcohol, a saccharide, a water soluble polymer, vitamins, amino acid, etc. are mentioned.

[0022] In addition, a moisturizer, an anti-inflammatory agent, a whitening agent, an astringent, a refrigerant, an extract, antiseptics, an antioxidant, a chelating agent, an ultraviolet ray absorbent, pH regulator, an extender, a color pigment, a photoluminescent pigment, organic fine particles, hydrophobing processing fine particles, hydrophilization processing fine particles, tar dye, an oily gelling agent, perfume, a germicide, etc. can be used. These may be used independently, respectively, and two or more sorts may be combined and they may be used.

[0023] The charge of makeup of this invention will not be restricted about a pharmaceutical form, if used as a charge of makeup. For example, basic cosmetics (face toilet, a cream, a milky lotion, sun block, etc.), hair cosmetics (pomade, charge for a haircut, etc.), makeup cosmetics (foundation, lip stick, etc.), etc. are mentioned.

[0024]

[Embodiment of the Invention] Next, although an example is given in order to explain this invention to a detail, this invention is not limited to this. In addition, the following examples - Each of 1-7 was the results of being stable with time, and there not being discoloration, a stench, and separation, either, and being completely satisfactory.

[0025]

Example -1 : A cleansing cream lotion formula Loadings 1. dimethylpolysiloxane The 60.0 sections 2. polyoxyethylene methyopolysiloxane copolymer 2.0 3. myristic-acid dextrin ester 0.3 4. perfume Minute amount 5. glycerol 5.0 6.1, 3-butylene glycol 15.0 7. sodium chloride 7.0 The whole quantity is set to 100 with 8. purified water.

[0026] The manufacture approach: Mix components 1-4 and cool to 20 degrees C after the heating dissolution. Then, agitating, components 5-8 are added, and it agitates until it becomes homogeneity. It is more good to use the homogenizer of high shearing force.

[0027]

Example -2 : Cream 1 formula Loadings 1. methylphenyl polysiloxane The 20.0 sections 2. squalane 3.5 3. olive oil 2.0 4. stearin acid 0.5 5. myristic-acid octyldodecyl 1.0 6. Pori (oxyethylene oxypropylene) 3.0 Dimethylpolysiloxane copolymer 7. dextrin palmitic-acid ester 2.5 8. perfume Minute amount 9. diglycerol 35.0 10. magnesium sulfate The whole quantity is set to 100 with 15.0 11. purified water.

[0028] The manufacture approach: Mix components 1-8, carry out the heating dissolution, and cool to 30 degrees C. Then, agitating, components 9-11 are added, and it agitates until it becomes homogeneity. It is more good to use the homogenizer of high shearing force.

[0029]

Example -3 : Cream 2 formula Loadings 1. hexa methyl cyclopentasiloxane The 28.0 sections 2. myristic-acid octyldodecyl 1.0 3. Pori (oxyethylene oxypropylene) 3.0 Dimethylpolysiloxane copolymer 4. cane-sugar stearic acid ester 4.0 5. perfume Minute amount 6. diglycerol 35.0 7. sodium citrate 12.0 The whole quantity is set to 100 with 8. purified water. [0030] The manufacture approach: Mix components 1-5 and cool to 25 degrees C after the heating dissolution. Then, agitating, components 6-8 are added, and it agitates until it becomes homogeneity. It is more good to use the homogenizer of high shearing force.

[0031]

Example -4 : Milky lotion 1 formula Loadings 1. decamethyl cyclopentasiloxane The 40.0 sections 2. squalane 5.0 3. polyoxypropylene methyopolysiloxane copolymer 7.0 4. cane-sugar isostearic acid ester 5.0 5. perfume Minute amount 6. dipropylene glycol 10.0 7. glycerol 15.0 8. magnesium chloride 15.0 The whole quantity is set to 100 with 9. purified water.

[0032] The manufacture approach: Mix components 1-5 and cool to 30 degrees C after the heating dissolution. Then, agitating, components 6-9 are added, and it agitates until it becomes homogeneity. It is more good to use the homogenizer of high shearing force.

[0033]

Example -5 : Milky lotion 2 formula Loadings 1. hexa methyl cyclopentasiloxane The 50.0 sections 2. liquid paraffin 5.0 3. polyoxypropylene methyopolysiloxane copolymer 6.0 4. glycerol palmitic-acid ester 2.0 5. perfume Minute amount 6. dipropylene glycol 10.0 7. glycerol 10.0 8. sodium citrate 10.0 The whole quantity is set to 100 with 9. purified water.

[0034] The manufacture approach: Cool to 30 degrees C after mixing components 1-5 and carrying out the heating dissolution. Then, agitating, components 6-9 are added, and it agitates until it becomes homogeneity. It is more good to use the homogenizer of high shearing force.

[0035]

Example -6 : A sunscreen cream formula Loadings 1. dimethylpolysiloxane The 25.0 sections 2. methylphenyl polysiloxane 15.0 3. polyoxypropylene methyopolysiloxane copolymer 5.0 4. Para methoxycinnamic acid-2-ethylhexyl 6.0 5. particle titanium oxide 5.0 6. glycerol behenic acid ester 3.0 7. perfume Minute amount 8. glycerol 25.0 9. sodium succinate The whole quantity is set to 100 with 10.010. purified water.

[0036] The manufacture approach: Cool to 25 degrees C after mixing components 1-4, and 6 and 7 and carrying out the heating dissolution. Then, agitating, a component 5 is used for a degree, a homomixer is used for this, and homogeneity is distributed. Next, components 8-10 are added, and it agitates until it becomes homogeneity. When the homogenizer of high shearing force was used, the base with more sufficient stability with the passage of time was made.

[0037]

Example -7: Liquefied foundation formula Loadings 1. dimethylpolysiloxane The 20.0 sections 2. methylphenyl polysiloxane 15.0 3. methyopolysiloxane cetyl methyopolysiloxane - 10.0 Pori (oxyethylene oxypropylene)

Methyl siloxane copolymer 4. titanium dioxide 7.0 5. talc 2.0 6. red ocher 4.0 7. dextrin oleate 5.0 8. perfume Minute amount 9. propylene glycol 25.010. sodium citrate The whole quantity is set to 100 with 9.011. purified water.

[0038] The manufacture approach: Cool to 30 degrees C after mixing components 1-3, and 7 and 8 and carrying out the heating dissolution. Then, agitating, a homomixer is used for this and homogeneity is made to distribute components 4-6. Next, components 9-11 are added, and it agitates until it becomes homogeneity. It is more good to use the homogenizer of high shearing force.

[0039]

[Effect of the Invention] The following experiments were conducted in order to prove the effectiveness of this invention.

[0040] The following creams were prepared in the charge of makeup which blended the example polyether denaturation silicone of an experiment, silicon oil, the polyhydric alcohol of the amount of specification, the salts of the amount of specification, and the oil phase thickener of the amount of specification. It compared about the temperature stability and a feeling of use. The formula used for the trial shows a result in Tables 1, 3, and 5 in Tables 2, 4, and 6.

[0041] Evaluation of a temperature stability-proof trial judged visually on the following criteria three months after.

O condensation[:separation /]-less **:separation and condensation --- small --- it is --- **

x: Those with separation / condensation [0042] Evaluation of a feeling of use judged the cream immediately after preparation on the following criteria by real use of 15 special panels.

O Twelve or more persons answered that it was good among :15 persons.

O 8-11 or more persons answered that it was good among :15 persons.

** : 4-7 or more persons answered that it was good among 15 persons.

x: Below the trinomial in 15 persons answered that it was good.

[0043]

[Table 1]

処方例 1 ~ 4 および比較例 1 ~ 4 一覧

原料名	処方例				比較例			
	1	2	3	4	1	2	3	4
1 メチルフェニルポリシロキサン	—	—	40.0	40.0	40.0	40.0	40.0	40.0
2 メチルシクロポリシロキサン	40.0	40.0	—	—	—	—	—	—
3 ポリオキシエチレン・メチルポリシロキサン共重合体	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
4 デキストリンパルミチン酸エステル	1.0	5.0	—	—	—	0.05	—	—
5 ショ糖ミリスチン酸エステル	—	—	4.0	0.5	—	—	15.0	—
6 グリセリンベヘン酸エステル	—	—	4.0	—	—	—	—	25.0
7 香料	微量	微量	微量	微量	微量	微量	微量	微量
8 グリセリン	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
9 クエン酸ナトリウム	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
10 精製水	残量で 100 とする。							

[0044] The manufacture approach: Cool to 30 degrees C after mixing components 1-7 and carrying out the heating dissolution. Then, agitating, components 8-10 are added, and it agitates until it becomes homogeneity.

[0045]

[Table 2]

試験結果

	処方例				比較例			
	1	2	3	4	1	2	3	4
耐温度安定性試験 (4℃)	○	○	○	○	×	×	×	×
耐温度安定性試験 (40℃)	○	○	○	○	×	△	○	○
耐温度安定性試験 (室温)	○	○	○	○	×	×	△	○
使用感	◎	◎	○	○	△	○	×	×

[0046]

[Table 3]

処方例 5～8 および比較例 5～8 一覧

原料名	処方例				比較例			
	5	6	7	8	5	6	7	8
1 ジメチルシクロポリシロキサン	30.0	—	—	5.0	30.0	30.0	5.0	5.0
2 オクタメチルシクロテトラシロキサン	—	30.0	30.0	—	—	—	—	—
3 ポリオキシプロピレン・メチルポリシロキサン共重合体	2.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0
4 デキストリンミリスチン酸エステル	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
5 香料	微量	微量	微量	微量	微量	微量	微量	微量
6 1, 3-ブチレングリコール	10.0	—	10.0	—	—	—	70.0	—
7 グリセリン	—	15.0	15.0	—	—	3.0	—	—
8 ジプロピレングリコール	—	—	15.0	—	—	—	—	40.0
9 ジグリセリン	—	—	—	50.0	—	—	—	35.0
10 硫酸マグネシウム	10.0	—	—	10.0	10.0	10.0	10.0	10.0
11 塩化ナトリウム	—	10.0	10.0	—	—	—	—	—
12 精製水	残量で100とする。							

[0047] The manufacture approach: Cool to 30 degrees C after mixing components 1-5 and carrying out the heating dissolution. Then, agitating, components 6-12 are added, and it agitates until it becomes homogeneity.

[0048]

[Table 4]

試験結果

	処方例				比較例			
	5	6	7	8	5	6	7	8
耐温度安定性試験 (4℃)	○	○	○	○	×	×	×	×
耐温度安定性試験 (40℃)	○	○	○	○	×	×	△	○
耐温度安定性試験 (室温)	○	○	○	○	×	×	×	△
使用感	○	◎	◎	○	×	△	×	×

[0049]

[Table 5]

処方例 9 ~ 12 および比較例 9 ~ 12 一覧

原料名	処方例				比較例			
	9	10	11	12	9	10	11	12
1 デカメチルシクロペンタシロキサン	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
2 ポリオキシエチレン・メチルポリシロキサン共重合体	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
3 ショ糖ステアリン酸エステル	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
4 香料	微量	微量	微量	微量	微量	微量	微量	微量
5 ジグリセリン	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
6 塩化ナトリウム	5.0	12.0	7.0	—	—	3.0	—	—
7 塩化マグネシウム	—	—	—	10.0	—	—	15.0	25.0
8 硫酸マグネシウム	—	—	5.0	10.0	—	—	10.0	—
9 精製水	残量で100とする。							

[0050] The manufacture approach: Cool to 30 degrees C after mixing components 1-4 and carrying out the heating dissolution. Then, agitating, components 5-9 are added, and it agitates until it becomes homogeneity.

[0051]

[Table 6]

試験結果

	処方例				比較例			
	9	10	11	12	9	10	11	12
耐温度安定性試験 (4℃)	○	○	○	○	×	×	×	×
耐温度安定性試験 (40℃)	○	○	○	○	×	×	○	△
耐温度安定性試験 (室温)	○	○	○	○	×	×	△	×
使用感	○	◎	◎	○	×	△	×	×

[0052] Although there was nothing that was excellent in the examples 1-12 of a comparison at stability and a feeling of use so that clearly from Tables 2, 4, and 6, stability and a feeling of use were excellent in the examples 1-12 of a formula.

[0053] As mentioned above, as for the charge of water-in-oil type emulsification makeup which blended polyether denaturation silicone, silicon oil, the polyhydric alcohol of the amount of specification, the salts of the amount of specification, and the oil phase thickener of the amount of specification, the effectiveness of improvement in stability and a feeling of use is accepted from the result of Tables 2, 4, and 6. Moreover, if polyether denaturation silicone and silicon oil are blended at a specific rate, the further improvement in stability and a feeling of use will be accepted.

[Translation done.]